

**METHOD AND APPARATUS FOR MONITORING AND CONTROLLING
IMAGING IN IMMERSION LITHOGRAPHY SYSTEMS**

ABSTRACT OF THE DISCLOSURE

A method of monitoring an immersion lithography system in which a wafer
5 can be immersed in a liquid immersion medium. The method detects an index of
refraction of the immersion medium in a volume of the immersion medium
through which an exposure pattern is configured to traverse and determines if the
index of refraction is acceptable for exposing the wafer with the exposure pattern.
Also disclosed is a monitoring and control system for an immersion lithography
10 system.

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